CC-B: SUPPLEMENTAL CAPITAL CONSTRUCTION REQUEST
FY 2007 - 08

Department Name: Revenue
Division Name: Motor Carrier Services Division
Project Name: Limon WB POE Lane and Scale Pit
Project Phase: Phase 1 of 1
Risk Management I.D. No.

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Submission Date: November 1, 2007
State Controller Project No. P-

Executive Director Approval: **Date:** __/__/____
OSPB Approval: Lisa Esgar **Date:** 12/10/07____

1. Criteria.

(a) Check One.

- ❑ **Emergency**
- ❑ **New Data**
- ❑ **Technical**
- • **Unforeseen Contingency**

(b) Describe the criteria: The Motor Carrier Services Division in the Department of Revenue has recently discovered that the scale pit in the westbound scale lane at the Limon Port of Entry facility has inexplicably deteriorated to a point of non-serviceability. The scale pit walls have buckled in several different directions, resulting in the scale deck binding and large pieces of concrete being dislodged from the pit. These conditions have caused the scale unit to provide errant and unreliable readings.

This problem is characterized as an unforeseen contingency because the deterioration occurred abruptly without any forewarning. Complete structural failure is possible prior to an appropriation made available in FY 2008-09. Such failure has already, and will continue to result in, potential hazards to the motoring public as well as lost revenue collections to the State of Colorado. Although the scale pit was replaced in 2001, an unforeseeable force has severely damaged the walls causing them to bind against the scale deck. Any resulting failure requires the westbound scale operation of the Limon Port of Entry to be closed, resulting in a significant loss of revenue, compromised highway safety, and increased road damage to I-70 and surrounding roads as a result of overweight vehicles. Currently, those westbound vehicles believed to be significantly overweight are being directed to the nearest exit, where they must turn around and proceed to the eastbound scale. After being weighed, cited and made legal where appropriate, the vehicles are directed to the nearest eastbound exit where they once again turn around to proceed westbound. This process is viewed as a less than desirable solution that must be done in a careful manner to avoid additional dangers to the carrier and the motoring public.

The Department is requesting $414,918 in HUTF "off-the-top" funding for this project.

2. Long Bill Appropriation Tables

Appropriation from Long Bill: SB 07-239					
Line Item(s)	**Total**	**CCFE**	**CF**	**CFE**	**FF**
Original Long Bill Items					
N/A – no prior appropriation	$0				
Requested Revision of Long Bill Appropriation					
Line Item(s)	**Total**	**CCFE**	**CF**	**CFE**	**FF**
New Long Bill Items					
Limon Westbound Scale Pit and Lane Repair	$414,918			$414,918	

3. Justify the change from approved budget request and/or FPP:

This request does not change an earlier approved budget request or existing appropriation because it is a new project; however, justification for a supplemental appropriation at this time is as follows:

Project Description/History:

The westbound Limon scale pit and scale adjacent scale lanes require replacement in order for the POE to continue its statutory mandate to enforce federal and state size and weight regulations at this port. The project is expected to cost $414,918. Similar requests have traditionally been funded through HUTF "off-the-top" revenue.

In Colorado, the POE is the primary mechanism for ensuring commercial vehicle compliance with state and federal size and weight regulations. Funded through HUTF off-the-top appropriations, POE performs significant enforcement functions for the State, including commercial vehicle size and weight compliance, commercial vehicle safety and hazardous materials transportation standards, and commercial vehicle registration and drivers' licensing requirements. It is through the division's certified enforcement of size and weight laws that the Federal Highway Administration (FHWA) distributes highway funds to states. The State of Colorado and FHWA invests hundreds of millions of dollars to build and maintain highway infrastructure. Maintaining and preserving this infrastructure and controlling its rate of deterioration must be a critical component of this investment.

The Ports of Entry, enforcement section within Motor Carrier Services (MCS) Division at the Department of Revenue, enforces laws concerning motor carriers and the owners and operators of motor vehicles, and assists motor carriers and the owners and operators of motor vehicles to comply with all tax laws, rules, and regulations pertaining to them. All POE weigh stations must be equipped with weighing equipment (CRS 42-8, *Port of Entry Weigh Stations*). Over 700,000 commercial vehicles in Limon are weighed on fixed scales. Inoperability of those scales prohibits weighing. Failure to weigh commercial vehicles increases safety risks, damage to pavement, puts federal highway funding in jeopardy, and violates the statutory mandates.

Colorado maintains ten permanent ports of entry throughout the State; most are open twenty-four hours a day. Subject to certain exceptions, every owner or operator of a motor vehicle or combination of vehicles having a manufacturer's gross vehicle weight rating or gross combination weight rating of 26,001 pounds or more must secure a valid clearance from a POE weigh station (or from an office of the Department of Revenue or an officer of the State Patrol) before operating such vehicles or combination of vehicles on the public highways of the State (CRS 42-8-105, *Clearance of motor vehicles at port of entry weigh stations*).

Justification:

At the westbound Limon Port of Entry, the underground concrete structure that houses truck weighing devices, called a "scale pit," has experienced a degree of structural failure that will continue worsening until replaced. Initial damage to the Limon westbound pit was reported during the first two weeks of July 2007, when personnel observed minor cracks in the westbound scale pit radiating from each corner. These minor cracks have been observed in other scale pits throughout the state and represent pressure against the walls of the scale pits. Over the next two weeks, personnel reported and documented abrupt and severe increases in the damage to the scale pit. The minor cracks widened to between 1 to 1.5 inches and the concrete began buckling in several directions. The most recent damage has caused the scale pit walls to move out of plumb and the scale to malfunction. The scale deck, a platform supported by the weighing mechanisms inside the scale pit, has begun to bind as a result of the scale pit movement.

During a review of the pit in late August 2007, it was noted that sections of the pit are dropping below grade while others are rising above grade. Additionally, the walls perpendicular to the leading and trailing walls were observed to be moving outward, creating significant gaps in the corners of the pit. The structural failure and dislodged concrete raise concerns for the safety of this pit. Pressure on the scale pits is caused by a number of sources such as soil expansion, truck movement and weight, concrete expansion, and increased amounts of water adjacent to the pits.

Surface repairs are not under consideration due to the severity of the cracks and movement of the scale pit walls. As a reference, a photo of a steel reinforced concrete scale *deck,* which the trucks roll over, is attached. The *scale pit* is the structure underneath the surface that holds up the deck and contains the weighing mechanisms. The top edges of the pit are about 1 foot wide and surround the deck. The pit is approximately a 12-foot x 12-foot x 7-foot concrete "vault." The approach and exit lanes are 0% grade, bump free, concrete lanes, minimally 100' long constructed of 13" thick concrete slabs. It is recommended that these slabs be poured 45" long, at least 12" wide, located on sleeper slabs at all joints.

Estimated Project Timetable:

Timetable			
Phase	**Start Date(s)**	**Completion Date(s)**	**Remarks**
Physical Planning Phase	4/1/08	9/30/08	Timing, scheduling, engineering, planning, bidding
Construction Phase	10/1/08	4/30/09	Construction will be completed during winter months under the direction of the selected contractor.

Cost Assumptions:

The basis of the cost estimate is detailed in the table below. The estimate is modeled after similar projects at the Monument and Fort Morgan ports of entry, as well as evaluation by the Colorado Department of Transportation. CDOT also added a component for the design and construction of the approach lane; a problem specific to this particular request.

Estimate for Limon Port of Entry Scale Pit, Deck, and Approach Lane		
Description of Work		Amount
Construction		
1	Mobilization	$ 12,815
2	Demolition	17,105
3	Structural excavation	12,474
4	Structural concrete scale pit	50,490
5	Structural scale lanes	150,500
6	Structural backfill	9,207
7	Steel deck	24,980
8	Electrical	3,784
9	Drainage pipe	891
10	Commission scale	1,350
11	Bond	4,850
	SUBTOTAL (1)	288,446
Professional Services		
	Geotech	3,612
	Engineering	10,114
	Material testing	6,089
	Advertising	619
	Code review	3,302
	Scale approach lane design and plan preparation	65,016
	SUBTOTAL (2)	$88,752
	TOTAL 1 AND 2	$377,198
	Contingency @ 10%	$37,720
	TOTAL WITH CONTINGENCY	**$414,918**

Operating Impact:

There are no additional operating expenses related to this request, however, there would be a reduction in revenue should the port become inoperable due to scale failure. In FY 2006-07, the Limon port cleared 1,003,879 vehicles and collected $344,232 in revenue. Revenue collections may be down approximately $14,343 per month of construction ($344,232 ÷ 12 months ÷ 2 side of the port).

4. Why is it necessary to have the appropriation prior to the Long Bill?

The urgency of the request is based on the imminent risk of the scale pit failing, which would result in the closure of the westbound side of the Limon port. The need for an appropriation during the current fiscal year is further demonstrated in the alternatives below:

(1) Replace scale pit and repair the scale lane and scale deck (preferred). This alternative entails two primary components:

Replacement of the scale pit and adjacent lanes is necessary to continue operations at this location. The pit has experienced severe forces causing it to move and the walls to fail, falling out of plumb at an alarming rate. Damage will continue due pressure from moving soils and moisture. Additionally, the forces generated by trucks as they slow down or accelerate on the scale lanes cause movement of the lanes toward the exterior walls of the scale pit increase damage further

In a similar project at the Ft. Morgan Port of Entry, CDOT engineers recommended replacing a portion of the approach lane using dowelled expansion joints and attaching the approach lane slabs to sleeper slabs at regular intervals. This design is recommended to prevent movement of the lane in any direction, particularly toward the scale pit

(2) Repair of the scale pit and scale deck (not recommended). This alternative is not recommended due to the excessive damage and rapid deterioration.

Repair of the scale pit and scale deck may be possible to re-establish structural stability and appropriate clearances. Repair would necessitate demolition of portions of the approach and exit lanes, and excavation of enough soil to expose the vertical concrete walls. The upper portion of the pit walls would be removed and repaired. Repair may be feasible and may extend the life of the existing scale pit. However, given the damage and rate of deterioration, this alternative is not recommended.

(3) Do nothing (status quo - not recommended).

Without replacement or repair, the pit will be rapidly destroyed due to environmental and man-made pressures. The concrete wall will continue to move and buckle, large pieces of the structure will begin to fall off, and trucks will not be weighed. The Department will be unable to meet its statutory mandate to enforce federal and state size and weight laws, potentially threatening public safety. Further, the westbound side of the Limon port will forego revenue collections.

5. Does this request require revision of a prior appropriation?

No. This is a new project.

6. Attach a copy of a complete Form CC-C of the *original* request.

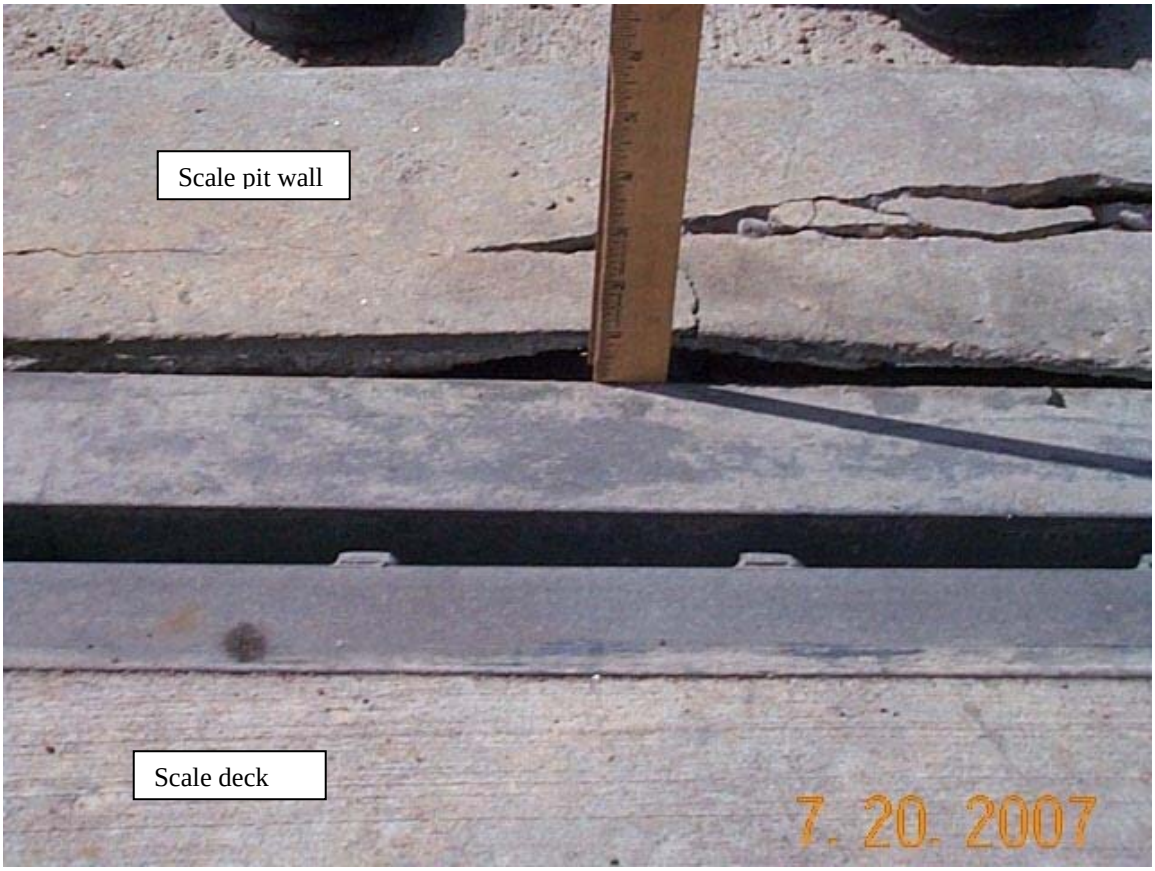
7. Attach a new completed Form CC-C (Element #1 only if there was a prior appropriation) to reflect this supplemental request.

8. Supplemental Requests Per SB 98-1331

a) Describe the urgency of the request

N/A – this is a regular supplemental request, rather than a SB 98-1331 emergency supplemental request. However, see numbers 3 and 4 above for description of urgency and additional justification.

b) List funds to be restricted: N/A

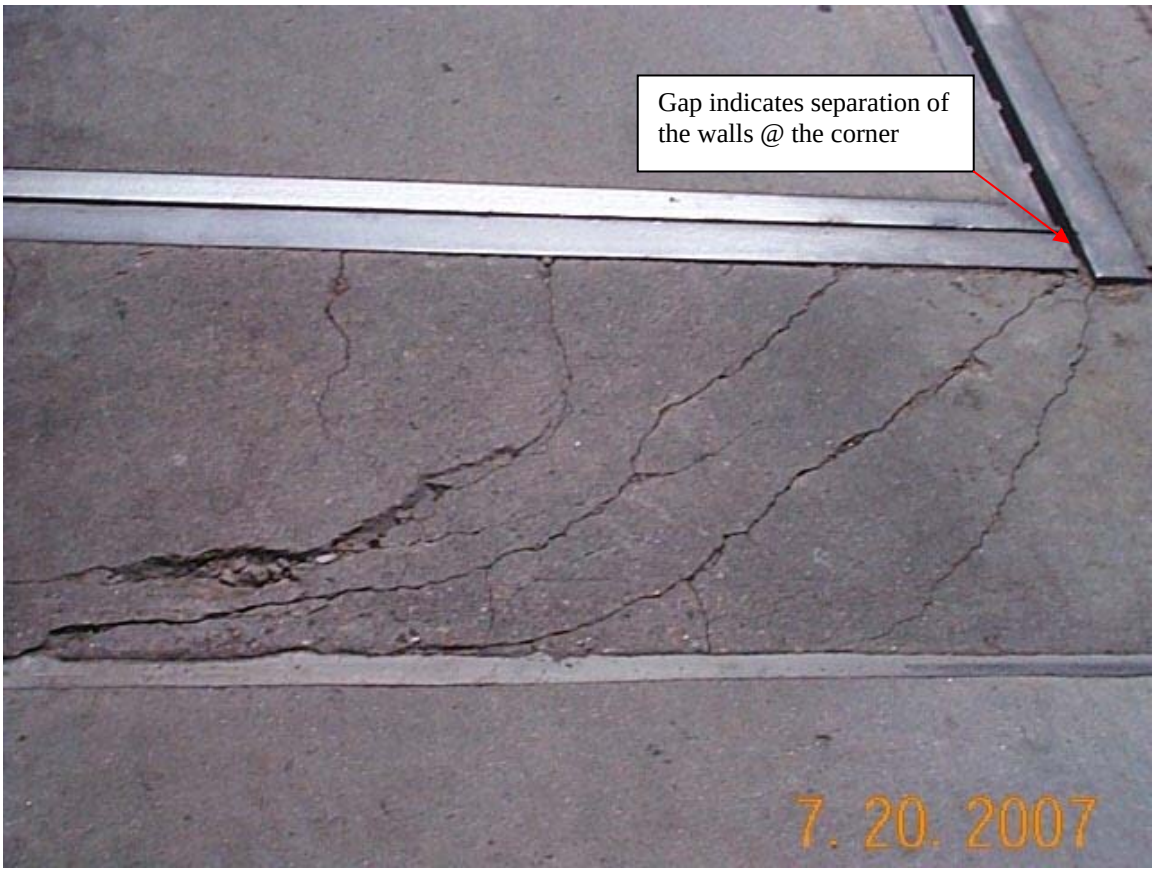



Exit side (west) of pit at joint with scale lane
7. 20. 2007


7. 20. 2007


2 metal pieces should be butted together forming a square
Detail of wall separation and moving
7. 20. 2007


7. 20. 2007


Gap indicates separation of the walls @ the corner
7. 20. 2007